

## **CORRECTIONS TO SPECIFICATION in reference to 9-11:**

Applicant proposes the following amendments to clarify the specification:

### **Reference Numerals In Drawings**

- 1 back section
- 2 buttocks section
- 3 thigh section
- 4 calves section
- 5 carriage
- 6 wheel
- 7 track
- 8 mattress
- 9 frame
- 10 pivot fixture
- 11 transfer link
- 12 projection
- 13 stop
- 14 connecting bar
- 15 lock spring
- 16 lower transfer link pivot
- ~~17 linear actuator~~
- 17A thigh calve and knee linear actuator
- 17BK back section linear actuator
- 17B buttocks section linear actuator
- 17CT coplanar calve/thigh section linear actuator
- 17K knee linear actuator
- 17L lumbar linear actuator
- 18 foot end pivot
- 19 connecting bar

### **Detailed Description**

In reference to Fig 3;

...While thigh section 3 and calves section 4 are inclined below horizontal, the force of footward motion of the ~~linear actuator 17~~ thigh calve and knee linear actuator 17A on the lower pivot point 16 of transfer link 11 results in... Further footward motion of the ~~linear actuator 17~~ thigh calve and knee linear actuator 17A results....

In reference to Fig 7;

...The lower transfer link pivot 16 is disposed along pivot fixture 10 so that the ~~linear actuator 17~~ thigh calve and knee linear actuator 17A (for the thigh section 3 and calves section 2 4 which remains inactivated) and buttocks section 2 form....

In reference to Fig 8

...The buttocks section 2 can be can be tilted at any position along track 7 as the ~~linear actuator 17~~ buttocks section linear actuator 17B for the buttocks section 2 reclining...

...crossbar 29 which is pivoted about carriage 5 when ~~linear actuator 17~~ buttocks section linear actuator 17B is retracted....

In reference to Fig 13

Fig 13 - shows the carriage linear actuator ~~17~~ mechanism, for back section reclining....

In reference to Fig 24

Fig 24 – shows a powered back arch support 68 with ~~linear actuator 17~~ lumbar linear actuator 17L.

In reference to Fig 32

...The control of ~~linear actuators 17~~ coplanar calve/thigh section linear actuator 17CT and knee linear actuator 17K ...include attachment points for the ~~linear actuators 17~~ coplanar calve/thigh section linear actuator 17CT and knee linear actuator 17K.

In reference to Fig 28A;

A sensible shape identification control switch for a reclining bed where the control is permanently mounted or hand held, whether the control housing or switch arm 92 has the protrusion 91 represents the pillow or head of a person to sensibly identify the switch for the back section and at the same time identify the orientation of the switch, which in turn identifies the calve/ thigh section as not

having the head, and in the case of this bed, the buttocks section in the middle. The switch arm 92 is pivoted at the pivot point 93 to which the rotation on the switch arm 92 would correspond to the movement of the back section or calves section thigh section reclining direction. Rotating the switch arm in the protrusion direction about the pivot point 93 ~~to which the rotation on the switch arm 92 would correspond to the movement of the back section 1 or calves section 4/ thigh section 3 reclining direction~~ would cause rotation of the represented section to recline pivotably in an upward direction by causing the linear actuator, which moves that section, to extend or retract until switch arm is released or section limit switch for maximum recline was reached by the section.

Rotating the switch arm in the protrusion direction about the pivot point 93 would cause rotation of the represented section to recline pivotably in an upward direction by causing the linear actuator, which moves that section, to extend or retract until switch arm is released or section limit switch for maximum recline was reached by the section.

The button 95 on the protrusion side would correspond to the upward rotation of the section. The calves section and thigh section are operated by the same switch throughout the rotation about the thigh section from feet elevated past horizontal to coplanar calves section and thigh section (leg section) down.

The back arch support button out 97 and back arch support button in 98 would operate the back arch support mechanism 68.

The present specification description explains of the operation of each bed section and it's control, and in conjunction with the amendments to identify the respective linear actuators the movement of each section, the operation of the section in relationship to each other should be understandable. The more complicated movement of the thigh/calve sections using a single linear actuator and transfer link 11, for both coplanar below horizontal and articulated above horizontal, is not claimed in the new claims due to the flexing or lack of rigidity when the bed is horizontal. Whenever the control is viewed by a customer for the first time, they immediately understand the operation of the bed when they play with the control. People familiar

with adjustable beds say this is the easiest controller they have seen, and for a much more complicated bed than what is on the market.

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### Operation

#### Bed positioning-

The switch arm 92 is pivoted at the pivot point 93 to which the rotation on the switch arm 92 would correspond to the movement of the back section or calves section thigh section reclining direction. Rotating the switch arm in the protrusion direction about the pivot point 93 would cause rotation of the represented section to recline pivotably in an upward direction by causing the linear actuator which moves that section to extend or retract until switch arm is released or section limit switch for maximum recline was reached by the section. The button 95 on the protrusion side would correspond to the upward rotation of the section. The calves section and thigh section are operated by the same switch throughout the rotation about the thigh section from feet elevated past horizontal to coplanar calves section and thigh section (leg section) down.

The back arch support button out 97 and back arch support button in 98 would operate the back arch support mechanism 68. For instance, the switch arm 92 on the control housing 94 having, protrusion 91 which represents a pillow, is pushed upward to cause the back section linear actuator 17BK to retract, pulling the carriage 5 headward which causes the back bar 24 to elevate the back section 1 until the switch arm 92 is released. To lower the back section, the switch arm 92 is pushed downward to cause the back section linear actuator 17BK to expand pushing the carriage 5 footward which causes the back bar 24 to lower the back section 1 until the switch arm 92 is released. The back section linear actuator 17BK will automatically stop when either end of it's stroke is reached. This operation is similar for the other linear actuators and their corresponding sections that they move.

The arm rests 44 adjusts for width and tilt and fold out of way when unlocked and rotated horizontally about arm rest folding swivel 77 when the desk is used as side table or end table. The arm rests are locked into the sitting position for entry and exit. To use the desk assembly to enter the bed, for a person requiring maximum support, the person would maneuver their wheel chair to the bedside near the thigh section 3 and calves section 4 pivot edge, facing the feet end of the bed, and then swing the desk assembly over their wheel chair. The buttocks sling 50 should already be under their buttocks in the wheelchair from their initial entrance, if not then it should be positioned under them. The ends of the buttocks sling 50 and back sling 51 are secured onto the arm rests 44 and the upward force of the height adjustment actuator will lift the person out of the wheel chair. The wheel chair is rolled out from under them and the swivel lock release button 79

pushed and locked "on" so that both hands and feet may be used to maneuver one's self and desk assembly into center of the mattress with the buttocks section 2 horizontal, and the back section 1 reclined. (The calves section 4 and thigh section 3 may be up but preferably down). The buttocks section 2 is tilted upward by activating the back section lever or push button lifting the person and slackening the buttocks sling 50 ends which are then unsecured and then back sling 51 unsecured. The slings may be left in place for future exit of bed, which is the reverse of entering.

To use the desk assembly to enter the bed, for a person requiring partial support, the person would position oneself between the armrests (buttocks sling 50 and back sling 51 may also be secured at this point if needed) and hold the two hand grips 78. The swivel lock release buttons may be configured to release one or more of the swivel locks 47. Both buttons have to be pushed in three depths to fully release all the swivel locks 47 allowing the person to maneuver body and desk assembly to the bedside near the thigh section and calves section pivot edge, facing away from the bed, with the buttocks section 2 horizontal, and the back section 1 reclined. (The calves section 4 and thigh section 3 may be up but preferably down). The buttocks section 1 is tilted by activating the ~~back~~ buttocks section lever or push button lifting the person from their feet while the swivel locks are locked to allow stability.

The person then can shift their body weight and buttocks by resting it on their elbows and forearms on the armrest 44, and sliding their buttocks towards the center of the mattress as far as they can by using their legs and feet to push on the foot rest and the mattress. The swivel locks are then released and the desk assembly positioned further towards the center of the bed and then locked again. This procedure is repeated until they are in position. The buttocks section 2 or the height adjustment actuator 52 can also be lowered and raised to assist in shifting the body weight to the elbows and forearms. A powered rotary actuator can be added to the swivel locks 47 to assist in the horizontal movements, but is not preferred due to low resistance of the ball bearings, complexity and cost, but for a person with weak arms and without the use of their lower body, it may be essential and offered as an option.

12. Claims 1-106 have been cancelled and new claims 107-128 include corrections to particularly point out and distinctly claim the subject matter.